

June 2011
Volume 3, Issue 1



South Carolina Department of Agriculture



Eat Smart...It's in the Garden

Newsletter provided by the
SC Department of Agriculture

Square Foot Gardening!!

Square Foot Gardening!! 1

*MyPlate Inspires
MyGarden* 2

*Announcing the SC
Statenwide Farm to School
Pilot Program* 3

Legare Farm Update 4

*SC Farm Bureau mini-
garden grant program* 5

The square foot garden (SFG) is one of the easiest, most affordable, low-maintenance, highly productive, and fun growing systems for families and classrooms.

Civil engineer Mel Bartholomew introduced the basic design and principles for the intensive organic gardening method thirty years ago. The SFG, a space-saving alternative to growing food in long parallel rows, requires a good measure of math. The basic square foot garden is a 4-by-4 foot bottomless box. The box contains 16 squares. You can anticipate quite a variety of produce within arms reach.

The number of plants per square foot is determined by the recommended spacing for the particular plants. For example, larger plants like tomato, pepper, corn, okra, cantaloupe, okra, eggplant, and sunflower each require one square foot. Help children read the seed packages to find optimal plant spacing after thinning. Then they must calculate how many seeds or transplants for each square. For example, if radishes are to be spaced 3 inches apart, then 16 seeds will fit in one square foot. If lettuce is to be spaced 6 inches apart, one square foot holds four transplants. How many carrot, beet, parsley, onion, pea, or marigold plants can be grown in each square foot?

Most boxes are constructed of untreated rot-resistant lumber such as cedar, black locust or redwood. Bartholomew recommends using two 2-by-6-by-8 inch boards cut in half to create each 4-by-4 foot box. Brick, concrete blocks and plastic lumber are also materials appropriate for box construction. Or, one can purchase raised bed kits. Having children draw a scale diagram of the box brings the concept of ratio to the garden.

The box is constructed and placed directly on top of the ground in a well-drained location receiving 6-8 hours of sun per day and away from natural or man-made structures that might shade the plants.

Rather than tilling, double digging and amending the soil on home property or campus, Bartholomew advises mixing a new potting medium just like one would do for container plants. His "soil of thirds" recipe — $\frac{1}{3}$ peat moss, $\frac{1}{3}$ vermiculite, and $\frac{1}{3}$ compost — challenges the gardener to calculate the total volume needed within the box before ordering the ingredients and mixing them.

After soil is added to the box, a grid is created to mark off the square foot sections. The grid gives an excellent opportunity to practice multiplication tables and to visualize square root. String or twine makes a temporary grid but a rigid permanent wood or plastic grid is necessary. Bartholomew would not consider the box a SFG without the framework of parallel strips designating each planting square. Without the grid the temptation is to revert to rows, which would be wasteful of resources such as space, seed, soil, water, tools, time and labor.

Will one box produce enough vegetables and herbs for a family of four? Probably not. A family might consider constructing one box (bed) for each member. For classrooms basic boxes may be placed together to form 4-by-8 foot or 4-by-12 foot raised beds. Maintaining the 4-foot width of boxes removes the need to enter beds and compact the soil. Most children can reach half way across the bed and then walk to the other side to reach the remaining half. Allow 3 to 4-foot wide pathways between raised beds.

Weeding, watering, and pest control is easy to accomplish in the compact SFG. Bartholomew handpicks weeds and pests one square at a time. With a family or class these chores are swiftly completed weekly. His watering equipment fits any school budget: a strong bucket and cup or dipper gourd. Hand dipping from the water pail is a method consistent with a child's down to earth way of gardening.

The SFG can be as versatile as your imagination. The basic box structure can become a Food Pyramid by constructing concentric boxes 3-by-3 foot, 2-by-2 foot and 1-by-1 foot and anchoring them upward to one corner atop the basic 4-by-4 foot box. The pyramid has a fountain effect too.

Some gardeners add vertical structures to one side of the basic box to support vines like squash and pumpkins. During winter the box may be converted to a cold frame or mini-greenhouse with plastic or glass windows over the top.

Dates to Remember:

October 1, 2011

**SC Farm Bureau Mini-
Garden grant applica-
tions due.**

October 12 –23, 2011

SC State Fair

"MyPlate" Inspires "MyGarden"

By Arlene Marturano

MyPlate, the new USDA visual icon for healthy eating, can be a template for a garden, MyGarden and a bumper crop of well-fed Americans.

The new MyPlate icon of the five essential food groups unveiled at a press conference by the USDA's Center for Nutrition Policy and Promotion on June 2, 2011 translates the 2010 Dietary Guidelines for Americans into a familiar and familiar visual image, the dinner plate.

MyPlate, two years in design, is the federal government's visual aid to promote health, lower risk of chronic diseases, and reduce overweight and obesity through nutrition and physical education.

Food Groups on MyPlate



The colorful plate graphic is easy to understand, remember, and versatile in its use with preschooler to geriatric populations.

The divided circular plate, not unlike divided plates for babies and toddlers, has four unequal color-coded quadrants: red for fruits and green for vegetables on half the plate and brown for grains and purple for protein rounding out the other half. Portion size for each group is indicated by the size of the quadrant on the plate.

The dairy food group is a small blue circle off and to the right of the plate where the beverage usually is placed at the

place setting.

The symbolic plate atop a place mat is a single place setting suggesting a sit down meal and a conscious intent to fill one's plate to match the model.

The USDA model plate follows the lead of several health promotion organizations like the American Diabetes Association and the American Institute for Cancer Research that use visual plate model images to direct meal planning.

Applying MyPlate

At the USDA's unveiling ceremony first lady Michelle Obama cautioned that although MyPlate is a simple icon for children to understand, the image alone will not stem the obesity epidemic and give all children access to fresh fruits and vegetables daily or to at least an hour of vigorous outdoor exercise each day. How parents, teachers, and caregivers integrate MyPlate into daily food experiences can make a difference though.

In considering the first lady's initiative with the White House kitchen garden as part of her national Let's Move program to thwart childhood obesity, one of the strongest extensions and applications of MyPlate is the creation of MyGarden.

MyPlate converts concretely to MyGarden as fast as children can draw a circle on the ground. Backyard, schoolyard, or community gardening is one framework to transport the icon into exercise and healthy eating practices. Growing food develops an understanding of the relationships between agriculture, food, diet, exercise and health. And gardening involves exercise, lots of it.

From MyPlate to MyGarden

Using the MyPlate visual as

the basic template for a garden implies a circular garden divided into the four sections represented on the plate. The USDA website provides lists of sample fruits, vegetables, grains and protein for each food group. From these lists garden planners can select seasonal crops.

One illustrative garden-plant selection plant list for a mid-western summer food garden follows:

Fruits

- Blueberries, cantaloupe, grapes, strawberries, watermelon

Vegetables

- Carrots, corn, cucumbers, onions, spinach, tomatoes, zucchini

Grain

- Amaranth, barley, buckwheat, millet, oats, popcorn, rye

Protein

- Black beans, edamame, garbanzo beans, lentils, peanuts, pumpkin, sunflowers

MyGarden can have any number of themes depending on gardener inclination and imagination. For example, ethnic origin, favorite recipes, chronic illness prevention, or region may influence themes. All gardens will be influenced by seasonal conditions.

Bring Back Seasonality

Seasonal changes affect human activities. Just as we change our wardrobe for seasonal weather, growing food requires

seasonal accommodations, which in turn affect diet.

The Slow Food movement, rise of local farmer's markets, seasonal chefs like Alice Waters and John Ash, and four-season gardeners like Elliott Coleman and Barbara Damrosch celebrate seasonality.

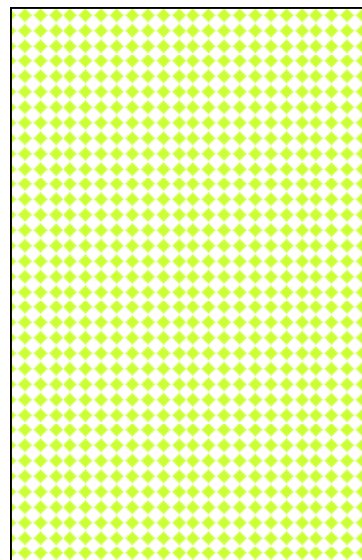
The USDA's MyPlate has the potential to serve up garden-fresh food year round at schools across the country via MyGarden. Already the USDA Food and Nutrition Services has in place a Farm to School initiative to connect selected K-12 schools with local farms and farmers so seasonal local produce is prepared in school cafeterias. Some School to Farm programs break ground for school and community food gardens for local lunchrooms.

From MyGarden to MyPlate

The cycle of life in the garden is replicated on one's plate throughout the year.

When MyGarden fills MyPlate at mealtime, the US population can, in time, reverse the current diet-related chronic diseases.

MyPlate can generate a bountiful harvest of ideas for human health and nutrition education.



Announcing the SC Statewide Farm to School Pilot Program



This information was presented by Dr. Holly Harring, statewide coordinator of South Carolina's Farm to School program, at the "Farm to School and Beyond..." conference, held on April 28, 2010.

South Carolina's Farm to School pilot program which is a collaborative effort between DHEC, the South Carolina Department of Education, the South Carolina Department of Agriculture and Clemson University. The two-year pilot program is funded by the Centers for Disease Control and Prevention.

The program will award approximately 52 sub-grants of \$3000 each to South Carolina schools. To participate this upcoming August, a school must agree to: a) purchase SC grown fruits and vegetables from local sources, b) provide menus that feature at least two locally grown fruits and vegetables per month, c) integrate agriculture and nutrition education into the school curriculum, and d) establish or revitalize a school garden. To help schools through these processes, regional coordinators have been hired.

Why should we start a statewide Farm to School program in South Carolina? The three-part answer includes the facts that first, South Carolina ranks near the top nationally in several cate-

gories of fruit and vegetable production (so there is much to go around).

Second, a farm to school program teaches students about the path from farm to fork by providing local produce in school meals (many young people unfortunately don't know anything about food production beyond fast food restaurants and grocery stores).

Third, the program would create a new market and increase revenue for small- and medium-sized SC farmers who often struggle with demand, while also lessening the environmental impact of transporting food long distances.

These three reasons to start a program correlate directly with the pilot program's mission: to connect schools and local farms with the objective of serving healthy meals in school cafeterias; to improve student nutrition; to provide agriculture, health and nutrition education opportunities; and to support local and regional farmers.

Core program components include:

1. Promoting healthy eating among school children through hands-on learning activities: Start a school or community garden, take students on field trips to local farms so they can also grow their own crops and follow them from seed to table.

2. Providing education to food-service staff and teachers on Farm to School practices – Ideas: Take food-service workers on field trips to farms so they can meet farmers, grow their own plants, and become involved in the process.

3. Starting or revitalizing a school garden.

4. Increasing the number of farmers that are certified to provide locally grown products into schools (this involves helping farmers navigate the Good Agricultural Practices auditing process).

Long Term Program Sustainability Goals Include:

1. Pass S.0812 and H.4200: Legislative bills that would require the Department of Agriculture to create and maintain a program to encourage schools to serve locally grown, minimally processed farm foods.
2. Increase the visibility and momentum of SC Farm to School through marketing as a strategy to strengthen local farms' economics and reduce childhood obesity.
3. Expansion beyond schools to other institutions, including after-school programs, hospitals and businesses.

Regional Coordinators:

Within the statewide pilot program, there will be three regional coordinators working with the Department of Agriculture: one each for the Upstate, Midlands and Low-

country. These coordinators will primarily work with small farmers to prepare them for and help them through the GAP certification process and to help connect local schools with their local farmers. There are also three Department of Education regional coordinators who will be working with schools, food-service directors and school garden supervisors. Additionally, there are three regional coordinators working out of Clemson University who will assist teachers in adding healthy nutrition and agricultural awareness coursework and activities to current teaching curriculums.

All of the regional coordinators will be available to help the schools implement and use their school gardens as outdoor classrooms for teaching not only healthy eating and active living lessons, but also math, science, social studies, language arts, and much, much more.

The overall goals are to help students, parents and faculty connect the importance of eating healthy, local SC produce when in season, and to see the benefits that it can provide to their personal health, the health of their communities, and most importantly the health of our children.

Farming Update from Legare Farms *by Helen Legare-Floyd*



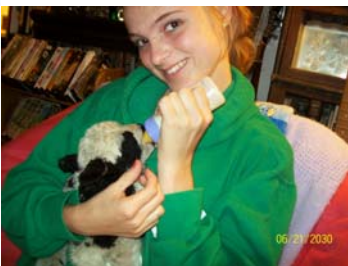
Every month, Helen writes a monthly update talking about all of the going-ons at her family farm, Legare Farms in Johns Island, SC. Check out these excerpts from her monthly newsletter.

May: Again, rain is the overwhelming thought in my head. Before this week, we had been praying and hoping for rain for almost two weeks. As I write this, I'm watching the sky. The promise of rain this week came through, so I'm thankful. The vegetables need rain; no matter how much irrigation we do, it's never enough. The pasture needs rain for good grazing for the cows, sheep, and goats. The new baby pigs need rain so they have mud for wallowing. Everything on the farm needs rain for one reason or another, so we're glad to be stepping over mud puddles.

We've completed the first two weeks of CSA vegetable deliveries. I've met some great new friends and gotten reacquainted with old ones. We have been harvesting lots of greens and root vegetables, but are starting to harvest some of the summer vegetables, like zucchini and cucumbers. I can't wait for the sweet corn and I know a lot of you are holding your breath waiting on the tomatoes.

We have new baby pigs at the farm. Two litters were born this last month for a total of 11 babies. The unusual thing is that 10 of the 11 are females, so we have girl power going on in the pig pen. The baby lambs are growing by leaps and bounds. We have four of them this year. One momma wasn't able to feed her

baby, so my niece Sarah raised her with a bottle at her house.



The first few days Annie had to be fed every three hours, so Sarah got a taste of what it would be like to have a baby. It's one of those life lessons that we are never too young to learn, especially when you are 15. Annie doesn't know she is a sheep. She thinks she is part of the family. She follows my brother-in-law Ed like a dog when he takes a walk every day. We are still having a few baby calves born, but are near the end of the calving season. I'll miss spring and all the new things it brings, but I'm looking forward to the summer vegetables that the heat brings.

We are working on sprucing up the playground/picnic area. We added this area to the farm seven years ago, and it's time for a facelift. If you have a teenager that can't find a summer job and would like to do some volunteer work this summer—do we have the opportunity for you! We can use volunteers for one day, one week, once a week, or just a few hours. Of course, it will be outside, so they may want to work in the mornings and head for the beach in the hot afternoons. We have fence repairing, fence painting, weed pulling, animal feeding, egg gathering, and I'm sure if they stay around long enough, there will be cow chasing. Volunteering looks good on college applications, too.

June: I can't complain anymore about not being hot enough for the tomatoes. The heat is here, as well as the afternoon thunderstorms. After my house got hit by lightning twice last year, I'm on alert whenever the thunders

starts to roll in. So far, there hasn't even been a close call this year. We'll keep our fingers crossed.

Did you know that pigs don't have sweat glands? That's why they wallow in the mud; it helps them cool off. Pigs are actually very clean animals, but get a bad reputation from the wallowing in the mud. I learned a lesson last Sunday when it was my turn to water the animals, especially the pigs. Never take a shower just before going to water the pigs. After filling the pig's water pans, I started running water onto the ground where they had a big hole dug out. One of our momma pigs came over and was really enjoying the running water and just having a good time in the mud and water. I'm standing right next to the fence watching her and feeling good about making her so happy when she stood up and shook like a dog. Mud went everywhere, but especially on me. I had mud in my hair, on my face, in my shoes, and anywhere else mud could land, and not just mud but pig mud. Needless to say, I took another shower when I got home.

We are now picking some of my favorite vegetables—sweet corn, bell peppers, cantaloupe. I can eat bell pepper just like an apple right off the bush. I also love squash, even though I can't get my husband Rick to eat them. We are now picking the second planting of squash. Squash is not a big fan of the heat, but hopefully it will last a few more weeks. The raccoons are wreaking havoc on the sweet corn and watermelons. I go to pick up a watermelon that looks perfect at first glance, but it doesn't weigh anything. I roll it over and there's a small hole the raccoon has dug out and taken his little hand to reach in and get all the good stuff out. In the sweet corn, they just reach up and grab an ear then pull the shucks back and eat the ear just like a human. Sometime they don't even break the ear of corn loose from the corn stalk.

I think I must have bumped

my head when we were planning how much eggplant to plant. We have eggplant coming out of our ears. I've been searching for new recipes to pass on to my CSA members. If you have any interesting eggplant recipes you would like to share, please pass them on. Okra is just starting to bear. Okra is one of those heat loving vegetables. I believe it originally came from Africa. The good thing about okra is that you can never have too much. Almost everyone will buy any extra okra: restaurants, other farmers, vegetable stands, and people just wandering in off the street. We also have to have extra okra to make our okra pickles. We made 400 pints last year and are just about out, so it's time to start again.

Next month we will get started on the pumpkin patch. It's always hard to be planning a fall event when it's so hot, but the pumpkins have to get planted in time to mature for October. As the vegetables finish up, we start plowing and bedding up for the pumpkins. Pumpkins get planted about the first of August, and then we really do pray for that rain. We aren't going to plant a corn maze this year, but will use the myrtle maze like last year. We are working on a new game to play in the maze. We had lots of good feedback on the myrtle maze and we think we can make it even better with a little more time. In case you don't remember, last year the worms ate the corn in the corn maze to the ground, so we had to come up with a new plan. We had a field full of our native wax myrtle, so we got our good friend Jim Cody to bring in his Gyrotrac and cut paths. It turned out great, especially at night. It had all of the traditional maze features, including dead ends, circles, and misdirection, and it was the biggest one we've ever had. Sometimes when you have lemons you have to make lemonade!

South Carolina Department of Agriculture



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We're on the Web!

www.agriculture.sc.gov
www.scschoolgardens.blogspot.com

School Gardens Program

The South Carolina Department of Agriculture started the School Garden initiative to provide schools and communities alike with the opportunity to learn healthy eating habits, as well as providing an effective and fun way to instill the appreciation for local agriculture and food production in our children and everyone else involved in the garden. Incorporating the health benefits of gardening activity with the educational process of development reinforces the Department of Agriculture's goals related to promoting the consumption of locally grown products.

For more information about the S.C. School Gardens program and to share information about your school garden program, contact:

Beth Crocker, (803) 734-2193, bcrocker@scda.sc.gov.



School Garden Mini-Grants Available for Teachers from Farm Bureau



In an effort to teach school children that agriculture is an integral part of our everyday environment, the SC Farm Bureau Young Farmer and Rancher program will offer a classroom garden mini-grant program for teachers in public and private schools.

The mini-grant program will provide a \$500 mini-grant to a school in each of the four South Carolina Farm Bureau districts for teachers who qualify through an application process.

Teachers must design a project garden that contains production agriculture crops such as wheat, corn, oats, peanuts, fruit and/or garden vegetables. Goals and objectives must be clearly stated

and measurable, and the project must directly involve their students.

In addition, the project must be advised by a county Farm Bureau volunteer leader, preferably a Young Farmer and Rancher member, county Farm Bureau Board member, or county Women's Committee member.

Proposals must be submitted on a SCFB mini-grant application form which is available at county Farm Bureau offices or by clicking [here](#). Deadline for applications is October 1 and applicants may submit only one proposal per year. Mail completed applications to PO Box 754, Columbia, SC 29202 or fax to 803.936.4452.